



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/089,892

08/27/2002

Richard Michael Gooch

2101/50762

6828

7590

03/30/2004

Crowel & Moring
Intellectual Property Group
PO Box 14300
Washington, DC 20044-4300

EXAMINER

PUNNOOSE, ROY M

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/089,892	Applicant(s) GOOCH, RICHARD MICHAEL	
	Examiner Roy M. Punnoose	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/5/2002</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

2. Some of the applicable section headings (see list above) are missing in the specification of the instant application. Appropriate correction is requested.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Great Britain on 06 April 2000 (06.04.00). It is noted, however, that copies of the certified copies of the priority documents have NOT been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 4-6, 9 and 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Rudnick et al (US 6,069,700).

With regard to claims 1 and 4-6, Rudnick et al (Rudnick hereinafter) discloses a measurement system 10 for use in computer aided manufacture or computer aided inspection

Art Unit: 2877

comprising a base measurement system 50 and a sensor means 20, the sensor means 20 being movable independently of the base measurement system 50 and being arranged to determine the distance between the sensor means 20 and a selected point (col.2, line 54- col.3, line 15), the base measurement system 50 being arranged to determine the position of the sensor means 20 relative to the base measurement system 50, the system comprising processor means 25 being arranged to receive information generated by the base measurement system 50 and the sensor means 20 and the processor means 25 being further arranged to derive position information relating to the selected point relative to the base measurement system 50.

Rudnick further discloses that the sensor means 20 is a laser stripe scanner (col.2, line 63 – col.3, line 4).

Rudnick further discloses that measurement system comprises at least one imaging device (col.7, line 29) and/or at least one laser tracker 50 (col.4, line 53).

Rudnick further discloses that the sensor means 20 comprises at least one position indicating means having a light source (the laser of col.2, line 56) and a retro-reflector 40 (see col.4, line 53).

6. Claim 9 is a method representation of the system of claim 1.

Rudnick discloses a method of measuring position information in computer-aided manufacture or computer aided inspection, the method comprising the steps of: positioning a first measurement device 20 in relation to a point to be measured;
generating with the first measurement device 20 distance information relating to the point;
generating with a second measurement device 50, that is positionable independently of the first measurement device 20, position information relating to the first measurement device 20, and

Art Unit: 2877

determining with the distance information and the position information further position information, the further position information relating to the position of the measured point relative to the position of the second measurement device 50 (see paragraph 5 above for the details).

7. Claim 11 is rejected because Rudnick discloses a component/part (see col. 4, lines 15-16) whose manufacture includes method of claim 9.

8. Claim 12 is rejected because Rudnick's invention is used in the manufacture of an aircraft (see col. 1, lines 10-14) and the manufacture includes method of claim 9.

9. Claims 13 and 14 are rejected because Rudnick discloses the use of computer, computer program for carrying out the method of scanning, detecting and measuring various components (see entire Rudnick reference). Computer program code and computer readable medium are inherent parts of Rudnick's invention.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2, 3, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudnick et al (US 6,069,700) in view of Corby, Jr. et al (US 5,805,289).

12. Claims 2, 3 and 7 are rejected because:

A. Rudnick teaches all claim limitations as disclosed above (in paragraphs 4-6) in a measurement system for use in computer-aided manufacture or computer aided inspection. However, Rudnick does not explicitly teach the following:

(a) A base measurement system further arranged to determine the orientation of the sensor means to the base with respect to the base measurement system;

(b) A processor means arranged to derive the orientation of features measured by the sensor means relative to the base measurement system; and,

(c) A memory means associated with the processor means, the memory means storing CAD data relating to the sensor means, in a measurement system for use in computer aided manufacture or computer aided inspection.

B. Corby, Jr. et al (Corby hereinafter) discloses:

(d) A base measurement system arranged to determine the orientation of the sensor means to the base with respect to the base measurement system (see col.4, lines 24-34);

(e) A processor means 23 arranged to derive the orientation of features measured by the sensor means relative to the base measurement system (see col.6, lines 34-46); and,

(f) A memory means associated with the processor means, the memory means storing CAD data relating to the sensor means (see col.7, lines 56-58),

in a measurement system for use in computer aided manufacture or computer aided inspection.

C. In view of Corby's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Corby's inventive elements into Rudnick's system, due to the fact that such a combined system would provide more functions and features in a measurement system for use in computer aided manufacture or computer aided inspection. Accordingly, such incorporation would have constituted an alternative means/obvious engineering expedience for one of ordinary skill in the art.

13. Claim 10 is rejected because:

A). Rudnick teaches all claim limitations except for calculating at least one vector passing between the second measurement device and a known point on the imaged portion of the first measurement device or structure. However Rudnick teaches of determining the coordinates of a retro-reflector (see col.6, lines 17-25) to locate the position of the retro-reflector in a measurement system for use in computer aided manufacture or computer aided inspection.

B). It is commonly known in the art that vector is an alternate term for coordinates of a point or position.

C). In view of what is commonly known in the art, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rudnick's teaching of

Art Unit: 2877

determining the coordinate of a point for calculating at least one vector passing between the second measurement device and a known point on the imaged portion of the first measurement device or structure due to the fact that such a modified system would provide more functions and features in a measurement system for use in computer aided manufacture or computer aided inspection. Accordingly, such modification would have constituted an alternative means/obvious engineering expedience for one of ordinary skill in the art.

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rudnick et al (US 6,069,700) in view of Corby, Jr. et al (US 5,805,289) and further in view of Pryor (US_5,608,847).

15. Claim 8 is rejected because:

A). Rudnick and Corby teach all claim limitations except a handling means to manipulate the sensor means and a tool mounted on the handling means in a measurement system for use in computer aided manufacture or computer aided inspection.

B). Pryor teaches of a handling means to manipulate the sensor means and a tool mounted on the handling means (see Figure 4a; col.5, line31 – col.6, line9) in a measurement system for use in computer aided manufacture or computer aided inspection.

C). In view of Pryor's teachings, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a handling means to manipulate the sensor means and a tool mounted on the handling means into Rudnick's system due to the fact that such a modified system would provide more functions and features to make the manufacturing and inspection process easier in a measurement system for use in computer aided manufacture or

Art Unit: 2877

computer aided inspection. Accordingly, such incorporation would have constituted an alternative means/obvious engineering expedience for one of ordinary skill in the art.

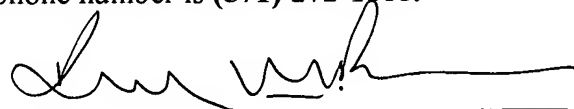
Conclusion.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Examiner Roy M. Punnoose** whose telephone number is **571-272-2427**. The examiner can normally be reached on 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the applicant can reach his **Supervisory Patent Examiner, Frank G. Font**, at 571-272-2415.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular and After Final communications.

Any inquiry of a **general nature** or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(571) 272-1585**.



Roy M. Punnoose
Patent Examiner
Art Unit 2877
March 22, 2004